Executive Summary
Of The

State of Louisiana
Highway-Rail Grade Crossing Safety Action Plan

March 2006

STATE OF LOUISIANA
HIGHWAY-RAIL GRADE CROSSING SAFETY ACTION PLAN

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This Action Plan is intended to analyze and systematically address for resolution the varied issues affecting Louisiana's highway-rail grade crossing safety. It is a living document that will be updated annually. This plan was initiated for several purposes:

- To focus and organize safety efforts to reduce the number of collisions and improve safety at highway-rail grade crossings in Louisiana;
- To be the highway-rail grade crossing portion of the new Louisiana Strategic Highway Safety Plan;
- To provide a response to the U.S. Department of Transportation Office of the Inspector General (OIG) report dated June 2004.

Louisiana has the regrettable distinction of being ranked among the top five states in the nation for the number of highway-rail grade crossing collisions and fatalities according to Federal Railroad Administration (FRA) statistics. Factors that contribute to Louisiana's highway-rail grade crossing safety record include:

1. More than 6,000 total (public and private) highway-rail grade crossings in LA;
2. All Six (6) Class 1 railroads in the United States and numerous short-line railroads operate in LA;
3. Community resistance to closing redundant highway-rail grade crossings;
4. Year-round dense vegetation growth and track curvature due to railroad; tracks that parallel meandering waterways, both of which impede driver's line of sight at crossings;
5. Many highways that parallel rail lines, with connector roads crossing the railroad tracks, making many highway-rail grade crossings near the roadway intersections;
6. Highway users not obeying warnings posted at the highway-rail grade crossings;
7. Inconsistent enforcement and prosecution of highway-rail grade crossing offenders;
8. Insufficient funding for all needed safety improvements;
9. Increases in Class 1 train volumes and speeds over the past 10 years.

This plan was developed with input from state, federal, local and private stakeholders of the highway-rail grade crossing safety program. Special review was given to the public highway-rail grade crossings where multiple collisions have occurred within the six-year period of 1999-2004.

In Louisiana, railroads operate in 57 of the 64 parishes. There were 52 parishes in which a total of 862 highway-rail collisions occurred at public crossings during the period of 1999-2004. FRA Inventory data shows that Louisiana has 3,435 public at-grade vehicle crossings and 3,133 private at-grade vehicle crossings and approximately 3,000 rail miles.

Pertinent highway-rail grade crossing data was compiled from FRA collision reports (FRA Form 6180.57) for the six-year period of 1999 through 2004 and FRA grade crossing inventory information for Louisiana. For the purpose of developing this Action Plan in Louisiana, further study of the state's highway-rail grade crossing safety issues began in early 2005 with a data review of the state's highway-rail grade crossings which had two or more collisions ("multi collision") within the six-year interval (1999 through 2004. The 177 public multi collision highway-rail grade crossings and the 432 collisions that occurred at these public crossings were included in this analysis as the "multi-collision" crossings. Per public law SAFETEA-LU SECTION 1401 Section 148 (d) (1) (A), federal safety funds can only be used on highway safety improvement projects on public roads or publicly owned bicycle or pedestrian pathways or trails. Therefore, only public crossings are eligible for federally-funded highway-rail grade crossing safety projects. A public highway-rail grade crossing is defined as a crossing where the roadway across the railroad track for which both approaches are maintained by a public authority and which is open to the public.

The "multi-collision" crossings data was compared to statewide highway-rail grade crossing collisions and inventory information to determine trends and look for areas of possible safety improvement.

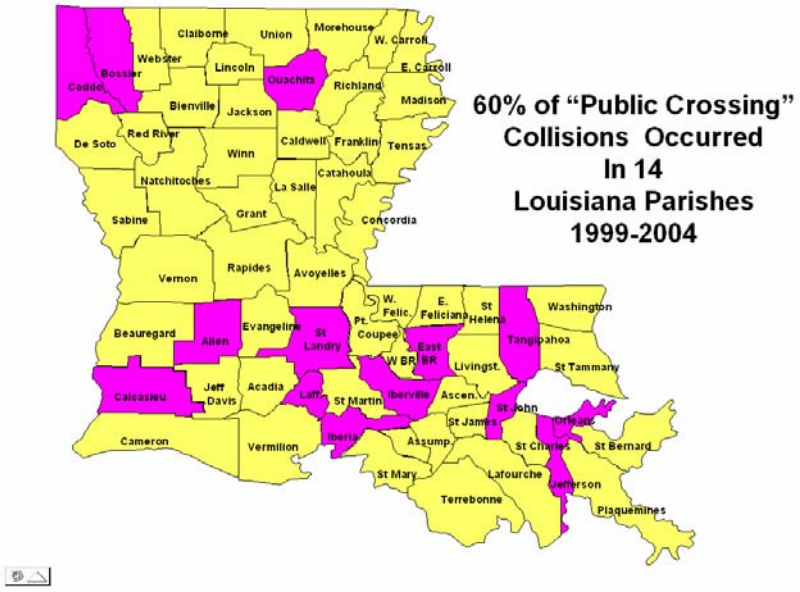
Several facts can be seen from the statewide data, the "multi-collision data, and a comparison of the two groups of collision data:

- Sixty percent of all statewide collisions (521 collisions) occurred in only 14 parishes - each experienced more than 20 collisions during this six-year period.
- Sixty-eight percent of the "multi-collision" incidents occurred in just 15 of the parishes - each experienced more than 10 highway-rail collisions.
- Two parishes accounted for 16% of the "multi-collision" incidents. These two parishes, East Baton Rouge (38 collisions) and Caddo (31 collisions) are both highly populated urban areas and are the parishes ranked the highest for all collisions during 1999-2004 (East Baton Rouge – 70 collisions and Caddo – 51 collisions).

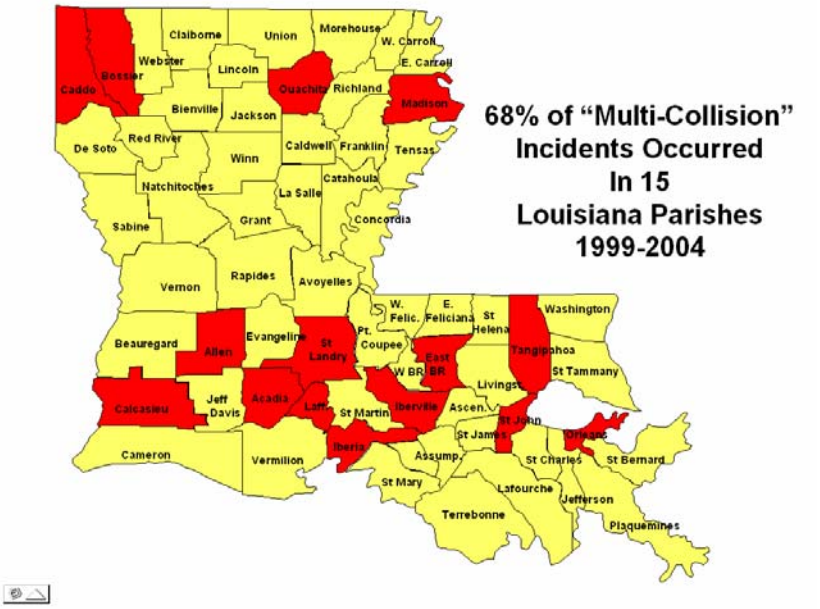
The two maps below give a graphical view, by parish, of where the majority of highway-rail collisions are occurring in Louisiana:

- "Purple Parishes" in the first map are parishes that have 20 or more total collisions from 1999 to 2004.
- "Red Parishes" in the second map are parishes with more than 10 of the "multi-collision" incidents from 1999 to 2004.

Map Showing Parishes with the Most Total Statewide Collisions



Map Showing Parishes with the Most "Multi-Collisions" Incidents



The majority of the parishes with higher number of highway-rail collisions are in both the statewide and "multi-collision" groups. Madison and Acadia Parish are the only two parishes in the "multi-collision" group that are not in the statewide group. Jefferson Parish is the only parish in the statewide group that is not in the "multi-collision" group.

Other facts that can be seen from the statewide data, the "multi-collision data and a comparison of the two groups are:

- The 177 "multi-collision" crossings comprise only 5% of the public crossings in the state, yet were the location for 50% of the collisions.

- Fifty-three percent of the fatal collisions and 58 percent of the injury collisions occurred at the "multi-collision" locations.

- Overall, more than 85% of the collisions occurred at crossings without gates. Only 14% of collisions statewide and 12% of collisions at "multi-collision" crossings occurred at crossings with gates and flashing light signals.

- For both the statewide and "multi-collision" data, more than 80 % of the collisions involved the train hitting the highway-user..

- Analysis of reports of the "Highway-User Action Prior to the Collision" shows that in 85% of the collisions statewide, and at "multi-collision" crossings, it was reported that the highway-user "Did Not Stop" at the crossing prior to the collision or "Stopped on the Crossing", thus, in the majority of the collisions, the highway-users did not heed the warning devices at the crossings.

- The highway-user was "Moving over the Crossing" at the time of the collision in a majority of the incidents, (70 percent for both groups).

- More than 53 percent of the statewide collisions, compared with 50 percent of the collisions at "multi-crossing" locations, involved an automobile or a van.

- According to an analysis using FRA Inventory information, a high percentage of the collisions occurred at grade crossings reported to be located within 75 feet or "near an adjacent highway intersection" (statewide = 78% and "multi-collision" locations = 97%.) Highway intersection, in this case, refers to all types of intersections of two roadways, including non-controlled, stop sign controlled and traffic signal controlled. For both data sets, a small percentage (3%) of the collisions occurred at crossings where the highway-rail grade crossing active warning device was reported to as "interconnected with a nearby traffic signal" - see Table 6. There are discrepancies between FRA's and Louisiana's database information concerning interconnection of highway-rail grade crossing active warning devices and nearby traffic signals. This issue is addressed in the "Action Items".

- Most of the collisions in Louisiana during this six-year period (statewide = 80%; "multi-collision" crossings = 79%) involved three of the six Class I railroads operating in the state: Union Pacific Railroad (UP), Kansas City Southern Railway (KCS), and the Canadian National/Illinois Central Railroad (CN). In addition, Amtrak (ATK) was

involved in 35 collisions and 21 of those (60 percent) occurred at the “multi-collision” locations.

- More than 90% of the collisions, for both groups, occurred on mainline track.

- In general, train speeds at the time of the collision were reported to be slightly higher at the “multi-collision” locations than for all statewide collisions. Train speeds averaged 29 M.P.H. for all statewide collisions and 31 M.P.H. for the “multi-collision” locations.

- A high percentage of collisions occurred with “average train speed at the time of collision” in the range of less than 10 M.P.H. to 20 M.P.H. (statewide = 41%; “multi-collision locations = 36%). One-quarter of the collisions occurred with train speeds in the range of 36-49 M.P.H. (statewide = 25%; “multi-collision locations = 26%). Train speeds of 50 M.P.H. or more were reported slightly more often at the “multi-collision locations” (statewide = 14%; “multi-collision locations = 17%).

- The majority of highway-users in both groups were males (statewide = 69%; “multi-collision” locations = 68%).

This review found very little difference in the collision data reported for all statewide collisions compared to that the data reported for “multi-collision” crossing locations with one notable **exception:**

Collisions at highway-rail grade crossings located near highway intersections make up 78% of the total statewide collisions, but comprise a much higher percentage (97%) of the collisions at “multi-collision” crossings.

The majority of the collisions at “multi-collision” crossing occurred at highway-rail grade crossings located near the intersection of two roadways. This issue of highway-rail grade crossings located near highway intersections will be a major focus of this Action Plan, beginning with the “multi-collision” locations.

Review of the data for all statewide collisions and for the “multi-collision” crossing locations suggest four additional points to be addressed in this “Action Plan”:

- The majority of highway-rail grade crossing collisions occurred in just 16 of Louisiana’s 64 Parishes.

- In the majority of collisions, the highway-user was a male.

- In 85% of the collisions, the highway-users did not heed the passive or active warning devices at the crossings.

- More than 85% of the collisions occurred at highway-rail grade crossings without gates.

Engineering improvements have been made or are already underway at many of the 177 “multi-collision” highway-rail grade crossings in Louisiana. A summary of improvements made or other actions taken can be summarized as follows:

- Four of the 177 crossings have been permanently closed and another five are closure candidates.

- Since 1999, 50 of the 177 have been equipped with gates.

- Since 1999, 61 of the 177 were equipped with either standard mast or cantilever flashing light signals.

- During the 2006 program year, 15 of the crossings are scheduled for upgrading.

- Forty of the 177 crossings are still under engineering review for additional improvements.

Highway-Rail Grade Crossing Safety Goals and Action Items

Goal: The initial goal of the Louisiana Highway-Rail Grade Crossing Safety Action Plan is to reduce the number of highway-rail grade crossing collisions at public crossings in Louisiana by 30 collisions per year by calendar year-end 2007.

Louisiana Highway-Rail Grade Crossing Safety Plan - March 2006
Timeline for Action Items

	Action Item	Lead Agencies	Apr 06	May 06	Jun 06	Jul 06	Aug 06	Sep 06	Oct 06	Nov 06	Dec 06	Jan 07	Feb 07
	Immediate Action Items												
IA1	Coordinate with Louisiana State Police (LSP) and local law enforcement agencies to improve reporting of motor vehicle crashes at highway-rail grade crossings and improve the quality of the data obtained from the motor vehicle crash reports.	LADOTD, LSP, FHWA, FRA	x	x									
IA2	Develop framework/conventions/system for a Geographic Information System (GIS) base map & layer maps that will contain all Louisiana highway-rail grade crossing information. This information will be formatted/networked so that the information can be looked at and sorted by Parish, Corridor, Statewide and other appropriate methods for complete analysis and summaries.	LADOTD, FHWA		x									
IA3	Complete a Diagnostic Review of the highway-rail grade crossings near highway intersections where multiple collisions have occurred (including reviewing the highway crash data at the highway intersection) to determine the causes and relationships of the collisions and safety improvement recommendations.	LADOTD, FHWA, RR & Local Agency Rep, LTAP	x	x	x								
IA4	Convene a working group of stakeholders to work with the Louisiana Department of Transportation and Development (LADOTD) to improve the process through which the state obtains, manages, analyzes and updates information for the Louisiana Highway-Rail Grade Crossing Inventory and Collision database.	LADOTD, FHWA, FRA		x	x	x							

	Action Item	Lead Agencies	Apr 06	May 06	Jun 06	Jul 06	Aug 06	Sep 06	Oct 06	Nov 06	Dec 06	Jan 07	Feb 07
	Short Term Action Items												
ST 1	Implement recently passed legislation providing LADOTD the legal authorization to close crossings in the interest of public safety - Louisiana Law, Act 347.	LADOTD, FHWA, FRA, RR Reps	**Legislation passed in August 2005**										
a	DOTD Identify 10 crossings to be closed under this new law and begin process to complete the closure.		x	x	x								
b	Partner with RR public project managers to coordinate crossing closure needs to improve corridor safety and set priorities for working on future crossing closures.			x	x	x							
ST 2	Implement Innovations and New Technology												
a	Revise and Implement LADOTD's preemption policy based on the current Manual on Uniform Traffic Control Devices (MUTCD) standards, national best practices, and the latest available technology (to include items listed below)	LADOTD, FHWA	x	x	x	x							
	i. Identify/categorize crossings that are candidates for preemption in accordance with the MUTCD standards; ii. Convene a working group to revise the LADOTD preemption policy; host a preemption workshop for the task group prior to drafting the policy to provide a thorough understanding of railroad and highway signal systems and how the two systems must function as a single system, and new technology available to better perform preemption. iii. Develop an implementation cost analysis, then present the draft LADOTD preemption policy to railroad companies and other appropriate stakeholders for review and comment. Revise as needed and finalize policy; iv. Develop/plan preemption training based on new approved LADOTD preemption policy; 1) LADOTD in-service – for LADOTD grade crossing designers and technicians, highway traffic signal designers and technicians, FHWA and FRA personnel. 2) Regional workshops for local jurisdictions through Louisiana Technology Assistance Program (LTAP) center beginning in the 16 parishes with the majority of statewide collisions and “multi-collision” locations; v. Prepare changes to traffic signal controller procurement specifications as needed to support new preemption technology; vi. Review/update this policy on a bi-annual (every 2 years) basis, if needed, as technology advances												
b	Yield or Stop signs at Highway-rail Grade Crossings	LADOTD, FHWA, LHSC, LAOL, LTAP	x	x	x								
	i. Develop a program to install Yield or Stop signs per the MUTCD at appropriate passive crossings beginning in 2006		x	x	x								

	Action Item	Lead Agencies	Apr 06	May 06	Jun 06	Jul 06	Aug 06	Sep 06	Oct 06	Nov 06	Dec 06	Jan 07	Feb 07
	ii. Research and determine if a legislative request for a resolution requiring all municipal governments and parish jurisdictions to identify and report all public crossings is needed.	LADOTD, FHWA, LHSC, LAOL, LTAP		x	x	x							
ST 3	Operation Lifesaver												
a	Locate by GIS mapping where Operation Lifesaver (OL) has trained presenters and where OL presentations have been made in the past 3 years and compare against where collisions are occurring	LAOL, LADOTD	x										
b	Evaluate and prioritize areas, such as the 16 parishes with the highest percentage of statewide collisions or a focus on male drivers, to target for increased OL education/presentations			x									
c	Develop plan to increase Operation Lifesaver presenters trained in these targeted areas			x	x								
d	Develop plan to increase OL presentations at local High Schools and to other appropriate groups in these targeted areas				x	x							
ST 4	Enforcement – Focused Enforcement of Highway/Rail Crossing Laws												
a	Locate by GIS analysis, crossing locations where highway-rail collisions have occurred – specifically identifying those near highway intersections	LADOTD, LAOL, LSP, LHSC, RR Company Reps., FRA	x										
b	Prioritize areas with a high highway-rail grade crossing collision history over time by parish and/or corridors to target for focused enforcement			x									
c	Work with law enforcement agencies in identified target areas to increase enforcement on a routine basis. (for example - enforcing “Do Not Stop on Tracks” and increasing Officer-on-the-Train program			x	x								
d	Partner with Louisiana State Police (LSP), local law enforcement agencies and railroad police departments to support legislation and implement an “Officer on the Train”/ “CARE” (crossing accident reduction enforcement) Program to increase enforcement of traffic laws regarding vehicle operation at highway-rail grade crossings				x								
e	Partner with Louisiana Highway Safety Commission (LHSC), Louisiana State Police (LSP), and each railroad law enforcement department to support legislation to allow the use of video surveillance/enforcement at crossings and on corridors with high collision history					x	x						
f	Review state laws pertaining to driving under the influence of alcohol and drugs and recommend policy changes if warranted.					x	x						

	Action Item	Lead Agencies	Apr 06	May 06	Jun 06	Jul 06	Aug 06	Sep 06	Oct 06	Nov 06	Dec 06	Jan 07	Feb 07
ST 5	Partner with Louisiana Local Technical Assistance Program (LTAP) Center to:												
a	Modify the LTAP Center's existing training on the Manual on Uniform Traffic Control Devices (MUTCD) and other Safety courses to include emphasis on signs, markings and signals at highway-rail grade crossings	LADOTD, FHWA, LAOL, LA LTAP		x	x								
b	Incorporate information on local agency responsibilities for inspection and maintenance at the highway-rail grade crossings in all appropriate LTAP Center training courses				x	x							
c	Work with the Louisiana Municipal Association and Police Jury Association through the LTAP Center to increase education concerning local agency responsibilities at highway-rail grade crossings. Develop partnerships for training and presentations on this topic				x	x	x						
ST 6	Distribute comments from Louisiana Railroad Safety Summit Held in March of 2005	LADOTD	**Completed**										
ST 7	Public Information & Education Regarding Train Volume and Speed												
a	Partner with railroads to create a process to improve notification of train volume and speed increases to affected cities/towns/parishes through the LADOTD	LADOTD, LAOL, RR Reps			x	x							
b	Develop Public Information material to educate drivers to be aware that train volumes and speeds at highway-rail grade crossings vary greatly from one crossing to another.					x	x						
ST 8	Improve Driver Education Regarding Highway-Rail Grade Crossing Safety												
a	Produce a drivers' education video with emphasis on highway-rail grade crossing safety.	LADOTD, LAOL, FRA			x	x	x	x	x				
b	Develop a plan to market and distribute the video to appropriate training organizations/agencies in Louisiana, including making it a requirement for all drivers to view this video when renewing their licenses							x	x				

	Action Item	Lead Agencies	Apr 06	May 06	Jun 06	Jul 06	Aug 06	Sep 06	Oct 06	Nov 06	Dec 06	Jan 07	Feb 07
ST 9	Continue Systematic Diagnostic Review Program to Review, Verify, and Document (in writing and with photos) the Conditions at all Public Highway-Rail Grade Crossings pertaining to: Sight distance, condition and location of warning signs, crossing surface, number and type of highway users, train volumes & speeds, and other pertinent inventory info, collision history, adjacent intersection info and traffic control in place, traffic signal, etc. Provide an annual summary report (for the HSIP) to FHWA on the number of field, diagnostic, and/or traffic signal preemption reviews completed.	LADOTD, FHWA, RR and Local Agency Reps			x	x	x	x					
	Long Term Action Items												
LT 1	Education - Institutionalize highway-rail safety information for all driver education courses in Louisiana	LADOTD, LAOL, FRA					x	x	x	x	x	x	x
LT 2	Enforcement - Continue to work with law enforcement agencies in Louisiana to increase focused enforcement of motor vehicle codes for highway-rail grade crossings on a routine basis.	LADOTD, LAOL, LSP, FRA					x	x	x	x	x	x	x
LT 3	Host an annual Railroad Safety Conference in conjunction with annual Traffic Safety Summit - include railroad companies on the conference planning committee	LADOTD, FHWA, LAOL, LA LTAP, FRA				x	x	x	x				
LT 4	Increase level of funding for LADOTD Railroad Safety Program												
a	Identify and prioritize funding needs for improving highway-rail grade crossing safety	LADOTD, FHWA, RR Reps						x	x				
b	Evaluate increasing the funding level, after passing of new federal transportation law and in the future							x	x				
c	Partner with railroad companies for joint funding of corridor safety projects in conformance with House Resolution 185.							x	x	x	x	x	x
LT 5	Develop an outreach program for increased legal awareness of highway-rail grade crossing safety issues	LADOTD, LAOL, LA AG, LSP, FRA								x	x	x	x
LT 6	Foster a closer working relationship between LADOTD Headquarters Rail Program staff and all District Railroad coordinators and HQ/District Traffic Operations staff												
a	Host annual meetings to discuss highway-rail grade crossing issues and share best practices	LADOTD					x	x	x				

	Action Item	Lead Agencies	Apr 06	May 06	Jun 06	Jul 06	Aug 06	Sep 06	Oct 06	Nov 06	Dec 06	Jan 07	Feb 07
b	Provide improved tools and communication to help Districts better handle highway-rail grade crossing issues	LADOTD						x	x	x	x	x	x
LT 7	Continue to investigate innovations for highway-rail grade crossing safety improvements, where appropriate, such as alternative (extendable or small foundation) gates, channelization, rumble strips, LED powered solar crossing signs, video/electronic enforcement, advanced warning devices and others. The "multi-collision" locations with active devices will continue to be reviewed under this process.	LADOTD, FHWA, RR Reps, FRA									x	x	x
LT 8	Evaluate the pros/cons and feasibility of hiring a consultant to augment LADOTD efforts for implementation and annual update of this Highway-rail grade crossing safety Action Plan	LADOTD, FHWA								x	x		
LT 9	Develop a long-term prioritized program focused on installing passive signing and pavement markings for public crossings, with special focus on major highway routes near the prominent railroad corridors	LADOTD, FHWA, LHSC							x	x	x	x	
LT 10	Develop a comprehensive highway-rail grade crossing corridor improvement program to include consolidation & closure awareness, based on new Louisiana highway-rail grade crossing closure law												
a	Develop outreach plan and support materials	LADOTD, LA AG, FHWA, LAOL, LA LTAP, FRA						x	x	x			
b	Develop a State policy to limit the proximity of new public crossings to existing public crossings								x	x	x		
c	Work with LADOTD's Access Management Task Force to develop policies to address the proliferation of private highway-rail grade crossings and transitioning to public crossings								x	x	x	x	
d	Partner with the LHSC, the LSP, and each railroad law enforcement department to support legislation to address the closing of private highway-rail grade crossings										x	x	x
e	Partner with Railroad companies to develop a corridor improvement program that includes consolidation and closures										x	x	x